

Remarks

Claims 1 through 26 are pending in the application, but claims 24 to 26 were withdrawn from consideration following an election/restriction requirement. New claims 29 to 39 are added herein.

Amendments

Claim 1 is amended to specify that the rapid ventilation valve is in a closed position when in stand-by mode and an open position when a start signal is triggered.

Claims 1, 2, and 4 are amended to recite that the sensor element senses a weight *release* from the flexible element to be consistent with the specification. The relevance of this amendment is referred to in the discussion of GB '674 and its disclosure below.

Claim 4 is amended to recite that a sensor threshold value for the weight release sensor is independent of an operating vacuum for the milking unit.

Claim 6 is amended to recite that the threshold value is relative to a force applied by the biasing element.

Claim 12 is amended to indicate that the sensor element is spaced apart from the flexible element.

Claim 17 is amended to replace "closing" with - - closed--, and replace "means" with -- element--.

Claim 18 is amended to delete reference to the rapid ventilation aperture.

Claim 20 is amended to be consistent with claim 14 from which claim 20 indirectly depends.

New claim 29 is a combination of claims 1, 14, and 17. New dependent claims 30 to 39 simply recite various species of biasing elements (claims 30 to 32), membrane arrangements

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(claims 33 and 34), and embodiments for sensor elements (claims 35 to 39) that are disclosed in the application.

The term “biasing element” as used in claims 17 and 29, as well as other claims, is broad enough to cover springs (element 11) and other devices. The detailed description as it relates to item 11 describes a preferred device and not all devices within the scope of that claim element. For example, the detailed description at paragraph 75 of the amended specification uses the terms “biasing element” and “spring element” even though they both use the identifier 11. The Summary of the Invention at paragraph 21, states that the preferred embodiment of the biasing element includes a spring, but it does not state that a spring is the only such device. Paragraph 23 goes further and describes a biasing element as possibly including a weight or electrical or magnetic forces. Paragraph 25 describes a biasing element as possibly being a control vacuum in a control space. Thus, the term “biasing element” is broad enough to cover a number of devices including, but not limited to, the devices set forth in the specification.

Rejection Under 35 U.S.C. §112

Claims 4, 6, 12, and 18 were rejected under 35 U.S.C. §112, second paragraph because their wording was confusing. The following defects have been remedied:

Claim 4 recited the phrase, “the predetermined threshold value is independent of an operating vacuum;”

Claim 6 recited the phrase, “the predetermined threshold value is influenced by the biasing element;”

Claim 12 recited the phrase, “the sensor element is contactless;” and

Claim 18 recited the phrase, “permits air to flow from a rapid ventilation aperture.”

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Applicants respectfully submit that the amendments described above adequately address the issues raised in the §112 rejections. Applicants respectfully request that the §112 rejections be withdrawn.

Rejection Under 35 U.S.C. §102(b)

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Great Britain Patent 1,481,674 ("GB '674"). To maintain a rejection under 35 U.S.C. §102(b), all of the elements of each claim must be disclosed in a single reference. The test for anticipation requires a strict, not substantial, identity of corresponding claim elements. *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1334-35, 2008 U.S. Appl. LEXIS 8404, 27-28 (Fed. Cir. 2008). Applicants respectfully submit that the anticipation rejection of claim 1 is moot in view of the amendment reciting open and closed positions corresponding to stand-by and triggered modes. GB '674 discloses the opposite configuration.

Rejection Under 35 U.S.C. §103(a)

Claims 2 to 14 and 17 to 21 were rejected under 35 U.S.C. §103(a) as being obvious over GB '674. The examiner acknowledges that GB '674 fails to disclose the elements of all these claims, but asserts that it would have been obvious to one of ordinary skill in the art to modify the cylinder of GB '674 to include the recited components. Applicants respectfully submit that this rejection fails to meet a *prima facie* standard for an obviousness rejection because there is no teaching, suggestion or motivation in GB '674 that would have made the claimed inventions obvious.

The Invention

The present invention is directed to a milking unit cylinder with a rapid ventilation valve, and various embodiments of the rapid ventilation valve are disclosed and claimed. One benefit of this rapid ventilation valve is that it responds very quickly to being moved from a stand-by

position to a milking position which thereby reduces milking time. This feature is emphasized throughout the specification. For example, the specification states: "Another aspect is that after the start signal, the milking unit can be displaced from the milker to the animal faster and requiring less force." (page 1, paragraph 5 of the amended specification); "It (milking unit cylinder) allows fast displacement of the milking unit toward the udder of the animal to be milked without requiring large operating forces from the milker. The considerable air intake due to the rapid ventilation allows the milking unit to be displaced rapidly and without requiring large forces ..." (page 6, paragraph 36 of the amended specification); "To achieve faster displacement of the milking unit..." (page 11, paragraph 67 of the amended specification); and "According to another proposal of the...invention for facilitating the starting process." (page 11, paragraph 68 of the amended specification). These advantages are not disclosed in the art of record, and are the result of the elements recited in the claims.

GB '674

The only reference relied on to reject the claims is GB '674, which corresponds to DE-A-2554998 ("DE '998") that was discussed in the corresponding PCT application Written Opinion (copy attached).

Regarding DE '998, the International Searching Authority concluded:

Document DE-A-2554998 (D1) cites as available prior art a device with all the features of claim 1. A flexible element (5) is connected to a pneumatic piston-cylinder device (1,2). At the occurrence of a weight relief, caused by lifting the suspension means of the milking set, a sensor element (membrane) releases the piston of the cylinder device via a switch, which is part of an electronic control system. At the same time, the control system directs the vacuum to the teat

cups. This acts as the starting signal for the milking process, see page 1 to page 2, paragraph 2; page 3, paragraph 8 to page 4, paragraph 1; figure 1.

The relief of the membrane according to D1, and therewith the triggering of the switching process, has a threshold value that is dependent on the membrane, but not on the operating vacuum. For this reason, the subject matter of claims 2 and 4 is anticipated by D1. The subject matter of claims 7-10 is also known from D1.

The present application does not meet the requirements of PCT Article 33(1), because the subject matter of claim 5 does not involve an inventive step (PCT Article 33(3)). Document DE-C-4438236 discloses a preloading element as a counterweight (5) which serves as a balancing weight. Should a person skilled in the art deem such a balancing weight necessary in the device according to D1, see figure 1, said person would, without thereby being inventive, add a pulley to the cylinder (1) and connect a counterweight to the milking device via a cable.

Applicants quote the International Searching Authority's Written Opinion to highlight the prior art as described in GB '674/DE-A-2554998, which may be as, or more, material than the apparatus disclosed in GB '674, particularly in view of the amendments herein. Applicants also note that the disclosure of DE '998 in the Background portion of this application may not describe as full a disclosure as the International Searching Authority did.

GB '674 discloses a piston-cylinder assembly for lowering a milking cluster 6 when an attitude sensor 18 senses that the assembly is at an angle relative to vertical. (Page 2, col. 1, line 63 to col. 2, line 89.) The examiner indicated that valve 17 in GB '674 is a rapid ventilation valve as recited in claim 1 of this application. In GB '674, the vertical position of the valve is a stand-

by position and the valve 17 is open. (Page 2, col. 2, line 70.) When the piston-cylinder assembly is tilted, the valve 17 closes, and the cluster lowers by gravity. There is no requirement that the tilting result from a weight being released from the flexible member, as recited in claim 1. This is not the same as the present invention. In the present invention as recited in amended claim 1, the ventilation valve is closed in a stand-by mode, and opened when the switch is activated.

Further, GB '674 fails to disclose a membrane, a biasing element that urges the valve toward a closed position, or any of the other details of the present invention. These details enable a ventilation valve to operate rapidly and reduce the time for attaching a milker unit to an animal.

The Standard for Prima Facie Obviousness

To establish a *prima facie* case of obviousness a three-prong test must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success found in the prior art. Third, the prior art reference must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). *See* M.P.E.P. §2143. This is modified by the motivation flowing from (1) the prior art references, (2) the knowledge of the skilled technologist, or (3) the nature of the problem being solved. *In re Dembiczak*, 775 F. 3d 994 (Fed. Cir. 1999). This rule has been clarified as being flexible in allowing a reason to combine that may not be limited to a teaching, suggestion or motivation. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007).

Obviousness is not to be read into an invention on the basis of the Applicant's own statements; that is, the prior art must be viewed without reading into that art Applicant's teachings. *In re Murray*, 268 F. 2d 226, 46 CCPA 905; *In re Sporck*, 301 F.2d 686, 49 CCPA 1039. The issue, then, is whether the teachings of the prior art would, in and of themselves and

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without the benefits of Applicant's disclosure, make the invention as a whole, obvious. *In re Leonor*, 395 F.2d 801, 55 CCPA 1198.

The Federal Circuit has strictly prohibited the use of the patent application at issue as a tool to combine prior art references to find obviousness. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). The obviousness of a claim should not be decided through the use of the claim as a "guide through a maze of prior art references which combine the right references in the right ways so as to achieve the result of the invention, as defined by the asserted claim." *General American Transportation Corp. v. Cryo-Trans, Inc.*, 893 F.Supp 774, 793 (N.D. Ill. 1995).

"The tendency to resort to 'hindsight' based upon Applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." M.P.E.P. §2142.

Allowability of the claims

Applying the relevant law to the present rejections leads to a conclusion that claim 1 is not anticipated, and none of the claims would have been obvious to a person skilled in the art. As stated above, amended claim 1 recites open and closed positions of the rapid ventilation valve that are not disclosed in GB '674. Therefore, there is no strict correspondence of elements between claim 1 and GB '674, and no anticipation of amended claim 1.

GB '674 discusses prior art that purportedly operated a valve by releasing a weight from a flexible element. GB '674 itself, is directed to a valve that is actuated by an incline detection switch that is an alleged improvement over the prior art described in GB '674. Activating a valve is the primary motivation of GB '674.

The present invention addresses valve activation, but it is the rapid evacuation valve structure and operation that distinguish this invention from both GB '674 and its description of prior art. As identified above, one of the primary benefits of the present invention is its rapid response to activation. Rapid response is made possible by the elements recited in the various claims. Importantly, the valves disclosed in GB '674 do not disclose details that would have taught, suggested or motivated a person skilled in the art to arrive at the claimed invention including the rapid ventilation valve.

In particular, GB '674 fails to disclose a rapid ventilation valve, especially one that is closed in a stand-by position. GB '674 also fails to disclose a weight release threshold value that is variable (cl. 3); a weight release threshold value that is independent of operating vacuum (cl. 4); a biasing element that biases the valve toward a closed position (cls. 5 and 32); the interaction of a sensor threshold value and a biasing element (cl. 6); sensors as recited in claim 10; a rapid ventilation valve having a control port (cl. 14); a rapid ventilation valve having a membrane for moving between a control port open position and a control port closed position, and a biasing element for biasing the membrane toward a control port closed position (cls. 17 and 29); and the various membrane configurations of claims 18, 19, 20, 21, 33, and 34. The combination of elements recited in claims 30, 31, 35, 36, 37, 38, and 39 are also not disclosed in GB '674.

There is no explanation in the action for how one skilled in the art would have been taught, suggested or motivated to modify GB '674 or the prior art described therein to arrive at the claimed inventions described in detail above. Thus, there is no teaching or suggestion of *all* the claim elements and these claims would not have been obvious, as indicated by *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

There being no such teaching, suggestion or motivation, strongly supports a conclusion that the rejection was based on improper hindsight using Applicants' own disclosure as a guide for modifying the discloser of GB '674. Applicants' respectfully submit that such hindsight fails to support the rejections, and the rejections should be withdrawn. Absent a *prima facie* basis for the rejections, the claims are allowable. Therefore, Applicants respectfully request the withdrawal of all claim rejections and prompt allowance of the claims.

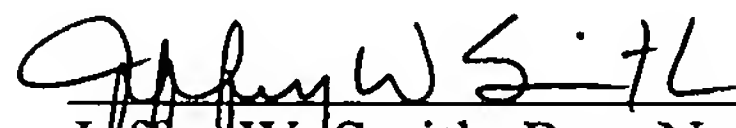
It is noted for the record that the term "biasing element" in claims 5, 6, 17 and 29, for example, is broad enough to cover springs (element 11) and other devices because the detailed description as it relates to item 11 describes the preferred device, but not all devices within the scope of that claim element. For example, the detailed description at paragraph 74 of the published specification uses the terms "biasing means" and "biasing spring" to suggest the two are of different scopes even though they both use the identifier 11. Further, in the Summary of the Invention at paragraph 21, it states that the preferred embodiment of the biasing element includes a spring, but it does not state that a spring is the only such device. Paragraph 23 goes even further and describes a biasing element as possibly including a weight or electrical or magnetic forces. Paragraph 25 describes a biasing element as possibly being a control vacuum in a control space. Applicants believe this interpretation of "biasing element" is apparent from the disclosure, but wish to emphasize the point to avoid any confusion.

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Conclusion

For the foregoing reasons, the claims of this application are allowable. Applicants respectfully request that this case be allowed and passed to issue.

Respectfully submitted,



Jeffrey W. Smith, Reg. No. 33455
Attorney for Applicant
SMITH LAW OFFICE
8000 Excelsior Drive, Suite 301
Madison, WI 53717
(608) 824-8300

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

See form PCT/ISA/210

Applicant's or agent's file reference

P0141-PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2004/012492

International filing date (day/month/year)

04.11.2004

Priority date (day/month/year)

04.11.2003

International Patent Classification (IPC) or both national classification and IPC

A01J5/017, A01J5/007

Applicant

WESTFALIASURGE GMBH

1. This opinion contains indications relating to the following items:



Box No. I

Basis of the opinion



Box No. II

Priority



Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



Box No. IV

Lack of unity of invention



Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement



Box No. VI

Certain documents cited



Box No. VII

Certain defects in the international application



Box No. VIII

Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/012492

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	13-23, 28	YES
	Claims	1, 2, 4, 7-10	NO
Inventive step (IS)	Claims	13-23, 28	YES
	Claims	5, 6	NO
Industrial applicability (IA)	Claims	1-28	YES
	Claims		NO

2. Citations and explanations:

Concerning Point V

The present application does not meet PCT requirements 33(1), because the subject matter of claims 1, 2, 4, 7-10 is not novel (PCT Article 33(2))

Document DE-A-2554998 (D1) cites as available prior art a device with all the features of claim 1. A flexible element (5) is connected to a pneumatic piston-cylinder device (1,2). At the occurrence of a weight relief, caused by lifting the suspension means of the milking set, a sensor element (membrane) releases the piston of the cylinder device via a switch, which is part of an electronic control system. At the same time, the control system directs the vacuum to the teat cups. This acts as the starting signal for the milking process, see page 1 to page 2, paragraph 2; page 3, paragraph 8 to page 4, paragraph 1; figure 1.

The relief of the membrane according to D1, and therewith the triggering of the switching process, has a threshold value that is dependent on the membrane, but not on the operating vacuum. For this reason, the subject matter of claims 2 and 4 is anticipated by D1. The subject matter of claims 7-10 is also known from D1.

The present application does not meet the requirements of PCT Article 33(1), because the subject matter of claim 5 does not involve an inventive step (PCT Article 33(3)).

Document DE-C-4438236 discloses a preloading element as a counterweight (5) which serves as a balancing weight. Should a person skilled in the art deem such a balancing weight necessary in the device according to D1, see figure 1, said person would, without thereby being inventive, add a pulley to the cylinder (1) and connect a counterweight to the milking device via a cable.

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

Claim 24 is formulated in such an unclear manner, that no opinion regarding novelty and inventive step can be made. The "holding of a milking device" always takes place, when reposing in a holding device. How a starting process can thus be triggered is not clear. A "fast ventilation" does not define what should be ventilated.